МІНІСТЕРСТВО ОСВІТИ І НАУКИ, МОЛОДІ ТА СПОРТУ УКРАЇНИ
ХАРКІВСЬКА НАЦІОНАЛЬНА АКАДЕМІЯ
МІСЬКОГО ГОСПОДАРСТВА

ЗБІРНИК ТЕКСТІВ І ЗАВДАНЬ
З ДИСЦИПЛІНИ

«ІНОЗЕМНА МОВА»
(АНГЛІЙСЬКА МОВА)

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INTRODUCTION

These educational materials are designed for the ESP students of Electric Transport Engineering specialties of the 1st year of studies to develop their knowledge and skills in English language.

This manual is based on the authentic texts from different sources concerning cross-cultural issues. It contains the tasks for reading and translation, vocabulary tasks and tasks for self-study.
Each unit contains:

- an authentic text for reading and translation;
- comprehension exercises;
- exercises for memorization and mastering key vocabulary;
- supplementary reading.

The manual is recommended for practical lessons.

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UNIT 1

ENGLISH IN THE MODERN WORLD

Activity 1. Read the text. Translate it in writing.

The total number of languages in the world is between 2500 and 5000. The most widespread languages are: Chinese, English, Spanish, and Russian. These languages are alive, they are in use. In addition to these, there are "dead" languages, which are no longer means of communication. These are, for example, Latin, old Slavonic and classical Greek. All these languages are called natural, because there is a number of artificial, or universal, or world languages. The non-specialized language known world-wide is Esperanto. There are programming languages which are used in computers.

Here we are going to deal with the living language which is spoken practically all over the world. It is spoken as the mother tongue in Great Britain, the USA, Canada, Australia and New Zealand.

What is English language? Knowing England's history makes it much easier to understand how the English language came to be as it is. Many English words originated from the language of the Angles and Saxons, the Danes, since English is descended from them.

Many new words were brought into English by traders and travelers. These new words come from all parts of the world.

Umbrella – Italian *Tea* – Chinese *Cigar* – Spanish *Tulip* – Turkish
Some words came to English directly from Latin.

The 10 most spoken languages in the world are…

Language	Numbers of "first language" speakers
Chinese	800 million
English	400 million
Spanish	290 million
Russian	275 million
Hindustani	250 million
Arabic	160 million
Portuguese	160 million
Bengali	155 million
German	130 million
Japanese	120 million

Activity 2. Read about ten amazing facts about English today. Fill in the gaps with figures given below, choose the right variant. Check your answers.

1. More than one billion people speak English. That is _____ of the world's population.

a. 50% b. 20% c. 10% d.80%

2. _____ people speak English as their first language. For the other 600 million it is either a second language or a foreign language.

a. 700 mln b. 200 mln c.400 mln d. 100 mln

3. The number of Chinese people learning English today is bigger than the population of the USA that is _____people.

a. 800 mln b. 600 mln c. 400 mln d. 200 mln

4. _____ of all information in the world's computers is in English.

a. 10% b. 20% c. 50% d. 80%

5. There are more than _____ words in the Oxford English Dictionary. Compare that with the vocabulary of German (about 200,000) and French (about 100,000).

a. 500,000 b. 400,000 c. 300,000 d. 200,000

6. Nearly _____ of all the companies in Europe communicate with each other in English.

a. 50% b. 20% c. 10% d. 5%

7. English is just one of over _____ languages in the world today.

a. 1,500 b. 2000 c. 2,700 d. 3000

8. _____ of all international letters and telexes are in English.

a. 25% b. 40% c. 50% d. 75%

9. _____ of all English vocabulary comes from other languages.

a. 90% b. 80% c. 70% d. 60%

10. When the American spaceship "Voyager" began its journey in 1977 it carried a gold disc. On the disc there were messages in _ languages. Before all of them there was a message from the Secretary General of the United Nations – in English.

a. 10 b. 25 c. 40 d. 55

Correct answers 1 b; 2 c; 3 a; 4 d; 5 a; 6 a; 7 c; 8 d; 9 b; 10 d

Activity 3. Match the headings with the paragraphs

English at Work and Play

The modern world is a very small place. Travel and communication are quicker and easier than ever before. Because of this, more and more people need a common second language. For millions that language is now English.

1. _____

English is the language of summit meetings (meetings between the most important world leaders) and the United Nations. Also, many foreign leaders speak in English to international journalists.

2. _____

Rock and roll began in America in the 1950s. Ever since, English has been the language of rock and pop. In Japan, for example, many of the most popular stars are British or American.

3. _____

Silicon Valley is near the town of San Jose in California. It's one of the world's top computer-science centres and has more than 3,000 companies. Because of its importance, a lot of vocabulary in modern computing is in American English.

4. _____

America (and also Britain) exports thousands of films and TV programmes every year. These appear on screens all over the world. Some countries show these films and programmes with sub-titles (for example, in France, French dialogue appears at the bottom of the screen). In other countries there are no sub-titles. Instead, different actors speak characters' dialogue. This is called "dubbing".

5. _____

Both of these subjects are now completely international. That's because doctors and scientists everywhere are trying to answer the same questions. The latest ideas in medicine and science appear in special international magazines called "journals". More than 60% of these are in English.

6. _____

Many European multi-national companies now use English as a common language. Some, for example, have German, Spanish, French and Italian workers. But they don't use four languages. Instead, they use English for all their letters, telexes and meetings. This saves a lot of time and money.

7. _____

Every pilot and ship's captain has to speak English. It's the language of the sky and sea. There's even an international travel alphabet. This makes communication by radio as easy and clear as possible.

8. _____

There are millions of Christians on every continent. It's the world's most international religion. But when Christian leaders from different countries meet, the language they use is English.

9. _____

The International Olympic Committee meets in Lausanne. That's where the world's sporting leaders plan the summer and winter Games. Two thousand years ago the language of the Olympics was Greek. Today, the official language of all IOG meetings is English.

A. Christianity
B. Science and Medicine
C. Politics
D. The Olympic Games
E. TV and Film
F. Air and Sea Travel
G. Pop music
H. Business
I. Computing

Activity 4. Complete the text with sentences a-f. There is one extra sentence.

1. The importance of English as a global language is growing all the time. Of course, there are more native speakers of Chinese than of English – about a billion compared to about 400 million. _____. And this number is getting bigger every year. English is the international language of politics, business, science, transport, advertising, the media and computers. _____. Even in countries like Germany, almost 90 percent of research scientists use their working language every day.

2. There are some other languages which are gaining in popularity: the number of people who speak Arabic, Chinese or Portuguese in different countries is increasing too. _____. Even in the USA the fastest growing language is Spanish!

_____. There are about 6,000 languages in the world but sadly many of them have an uncertain future. In fact, about twenty languages are disappearing every year.

3. Surprisingly, the Internet may offer a solution to this problem. Although it is true that English dominates the Internet, the number of websites in other languages is growing very quickly. With chat sites and messenger programs people can communicate more easily than before and in any language they know. _____.

A For example, approximately 70 percent of websites are in English.
B But almost one and a quarter billion people across the world use English as a second or foreign language.
C In the future students may have to learn global English.
D Not all languages are so successful, however.
E So perhaps modern technology can help save some languages from dying out.
F Some languages like Urdu or Hindi are growing much faster than English.

Task 2. Choose the best headings A-C for the text.

A English in the world ____
B Languages around the world _____
C The language of the Internet ____

UNIT 2

UKRAINE

Activity 1. Read the text. Consult your dictionary.

Symbols of Ukrainian Nation

The Ukrainian flag consists of two horizontal fields: blue and yellow. The fields symbolize two very important things for people: the peaceful blue sky and yellow wheat, as the symbol of welfare of our nation. The combination of the blue and yellow colours dates back to pre-Christian times. They predominated on the flags of the Kyivan Rus and were prominent during the Cossack age.

The national emblem of Ukraine is a gold trident on an azure background. In ancient times it was the dynastic coat of arms of the Kyivan princes. It is derived from three spears of the sea god, Poseidon, but since Christianity it has symbolized the Holy Trinity.

In 1992 the Supreme Council of Ukraine accepted the trident as the main element of the official emblem of our state. It was proved once more by the Constitution of Ukraine, adopted in 1996. So nowadays the trident is the essential

part of the Little State Emblem (the Sign of Volodymyr State), which is the main element of the Big State Emblem.

The plant symbol. The symbol of "Kalyna" is associated with rebirth, the Universe, the fiery trinity of the Sun, Moon and stars. It takes its name from the old name for the Sun-Kolo. The berries of the kalyna are red and they symbolize blood and immortality.

Other Signs of National Identity

The following are also associated by Ukrainian people with their nation. Ukrainian mentality was formed influenced by many factors: geographical location at crossroads of West and East, specific climate conditions and complex historical destiny. There is a certain stereotype of the Ukrainians which is well known both in their native land and in other countries. For instance, the Ukrainians are supposed to be great eaters and to eat large amounts of their traditional food: borsch, salo, and varenyky. People all over the world usually play jokes on their appetite.

At the same time Ukrainians are well-known for their hospitality. It became a tradition in Ukraine to meet guests with bread and salt and to offer them Ukrainian traditional meals.

Ukrainian people are also renowned for their dancing and singing ability. They really enjoy music and many of them like to perform in choruses and folk dance groups.

Clothes. White blouses and shirts with embroidery, chaplets for young girls and ornamented headscarves for women are the elements of Ukrainian national folk costume. Footwear includes red high boots for women and black high boots for men. These costumes are hardly ever worn in everyday life but they are well-known signs of Ukrainian identity.

Music instrument. A stringed instrument called the bandura is regarded as distinctively Ukrainian.

Activity 2. Find in the text the right word for:

1. A stringed instrument which is regarded as Ukrainian sign of national identity;
2. The element of folk costume which young girls wear on their heads;
3. A traditional Ukrainian dish made of water, meat, and vegetables;
4. People who have good appetite;
5. Singing in a large group or a large group of people singing together;
6. The feature of Ukrainian national character connected with their attitude towards guests;
7. The name of the sea God;
8. The old name for the Sun;
9. The symbol of the sea God power, which he always had in his hand.

Activity 3. Complete these sentences with the appropriate words.

1. Traditional Ukrainian dishes include _____ and _____.
2. Ukrainians enjoy folk _____ and like to perform in _____.
3. Each nation has a certain stereotype of national character and some common features related to certain kinds of _____ in this country.
4. Ukrainian women wear folk costumes including white _____ with embroidery, red _____, _____ or _____, only on special occasion.
5. The _____ is the main element of the official emblem of our state.

Activity 4. Read the text. Consult your dictionary.

At the Map of Ukraine

Ukraine is situated in South Eastern Europe on the crossroads of the ways from Asia to Europe. This position is very favourable for establishing contacts with other countries.

In the North it borders on Belarus, in the east and North East on Russia, in the South West its neighbours are Hungary, Romania and Moldova, in the West – Poland and Slovakia. In the South Ukraine is washed by the Black Sea and the Sea of Azov. Its territory is 603,700 square kilometers. By comparison, the areas of France and Spain are 551,600 and 507,600 square kilometers, respectively.

Ukraine occupies only 0. 45% of the planet dry land, but about 5% of the world's mineral resources are concentrated here. There are large deposits of coal, iron ore, oil, and gas. It is also rich in a variety of precious raw materials, such as phosphorite, graphite, native sulphur, apatite, rock salt etc.

Most of the territory is flat, so flatlands constitute 95%. Basic physical-geographical zones are: mixed forest (Polissya), forest-steppe and steppe. The mountains are in the West (the Carpathian Mnts) and in the South (the Crimean Mnts). They are not high. The highest peaks are Hoverla in the Carpathians (2,061 m) and Roman Kosh in the Crimean Mountains (1,545 m). The main rivers are the Desna, the Buh, the Siversky Donets, and the Tisza. They are one of the country's sources of hydroelectric power. The longest river, the Dnieper, flows to 2200 km into the Black Sea. It divides Ukraine into Right-bank and Left-bank territories. The climate is mostly continental, being subtropical on the South Crimean Coast.

A few more facts:

1. Ukraine's flora number close to 30,000 higher and lower plant species.
2. Ukraine's wildlife is represented by over 44,000 animal species.
3. Ukraine is washed by 73,000 streams of water including 131 rivers more than 100 km long.

Activity 5. Complete the table using information from the text.

Official name	
Area	
Population	
Countries to border on	
Capital city	
The biggest cities	
The highest mountain	
The longest river	
Main sources of income	

Which piece of information is not in the text? Can you provide it?

Activity 6. Find the following numbers in the text. What do they refer to?

95%	603,700	30,000
0. 45%	551,600	44,000
5%	507,600	73,000

Activity 7. Find the following information in the text.

1. Two types of climate that Ukraine has _____
2. Three types of physical-geographical zones _____
3. The names of two parts in which Ukraine is divided by the Dnieper. _____

Activity 8. Read the text about Kyiv and find out:

1. The date of Kyiv foundation.
2. The names of the founders.
3. Three events that influenced the life of Kyiv inhabitants.
4. The name of the main street and its length.
5. The names of historical monuments and museums mentioned in the text.

Kyiv is considered one of the largest and most beautiful cities in the world. Its history goes back to the remote past. According to the historiography Kyiv was founded at the end of the 5th or at the beginning of the 6th century.

A well-known legend which came to us, says that the founders of the city were three brothers Kyi, Shchek and Khoryv. So the city got its name after the eldest brother Kyi.

With the foundation of Kyivan Rus Kyiv became its capital.

Centuries passed over it and left their mark here. The city saw the great Tatar invasion, came under Polish and Lithuanian rule, suffered greatly during the Great Patriotic War.

Nowadays Kyiv is not only the capital of Ukraine, its cultural, scientific, administrative and industrial centre.

Kyiv stretches on the high hills along the Dnipro River. With its abundant greenery and chestnut trees it looks like a huge park.

The main street is Kreschatik. The street is only one kilometer long but it is very impressive. Besides government offices and administrative buildings you can see large cinemas, restaurants, shops and cafeterias.

From its past the city inherited a great number of historical monuments. Among them Saint Volodymyr's Cathedral, Sophia's Cathedral, Saint Andrew's Church, Kyiv-Pecherska Lavra, which remind people that Kyiv has always been the center of Slavonic culture and Orthodox Church.

Kyiv has many museums: the Natural History Museum, the Museum of Historical Treasures, the Ukrainian Art Museum, the Museum of Western and Oriental Art, and the Ukrainian Museum of Folk Architecture and Ethnography. The museums can boast of their wonderful collections. Kyiv is proud of the Shevchenko Opera and Ballet Theatre, the Lesia Ukrainka Drama Theatre, the Theatre of Musical Comedy, the Conservatoire etc.

Kyiv is a busy industrial city. Its numerous enterprises produce excavators, aircrafts, computers, engineering machines, precision instruments, chemical goods and textiles and all kinds of consumer goods.

Not only inhabitants of Kyiv but all citizens of Ukraine are proud of their capital.

Activity 9. Read the summary of the text. There are a few mistakes in it. Say if the sentences are true or false.

1. Kyiv, the capital of Ukraine, is one of the most beautiful cities in the world.
2. Kyiv is 2 thousand years old.
3. The founders of the city were three brothers: Kyi, Shchek and Khoriv.
4. Almost all the monuments in Kyiv are quite new.
5. Kreschatik is a very long street.
6. Kyiv stands on the banks of the Dnipro River.
7. Kyiv has abundant greenery and looks like a huge park.
8. All citizens of Ukraine are proud of their capital.

Activity 10. Read the text. Consult your dictionary.

The Main Cities of Ukraine

Kharkiv

Kharkiv is the second largest city in Ukraine after Kyiv. It is the administrative center of Kharkiv region, the historical capital of Slobidska Ukraina.

The history of Ukrainian Kossatstvo is closely connected with the region.

Generally accepted date of Kharkiv foundation is 1654/1655. First it was a fortress but its favourable geographic location contributed to the transformation of the fortress into a trading, technological and industrial center.

For 16 years Kharkiv was Ukraine's capital which helped it to become a large scientific, cultural and educational center. In terms of industrial enterprises, higher educational establishments, colleges and research institutes Kharkiv ranks the second place in the country after Kyiv.

Odesa

Odesa is a very special city, a true gem on the Black Sea coast. It is more than 200 years old. The founder of Odesa was Due de Richelieu (later Prime Minister of France). The city developed as a port and trading center, attracting many people from all over the world. With its beautiful harbor on the Black Sea, Odesa has become Ukraine's "Southern Window" to Europe and an important cultural resort within a very short period of time. The port is the city's heart. Ukraine's independent commercial fleet is moored here and the harbor is always filled with an endless stream of tankers and cruise ships.

Zaporizhzhya

Zaporizhzhya is a busy industrial city in the south of Ukraine. It is a land of plenty, situated behind the Dnipro rapids, which were once inaccessible. This is a cradle of Zaporizke Cossatstvo, well-known all over the world. Khortytsya, the largest island on the Dnipro is a green emerald of Zaporizhzhya. Dniprohes, the most powerful electric station in Europe in the 30-s is situated here.

Lviv

Lviv, is the ancient capital of Galychyna. Lviv, "Lion city" was named by its founder the Galychian-Volynian Prince Danylo Galitsky, in honour of his son Lev. The city was first mentioned in Galychian-Volynian Cronocle in 1256.

Busy trade led to the city's dramatic development and prosperity. As early as the 15-th century the city had its own mint, water supply system and regular international post. The streets were paved with cobbled stones and new houses were constantly being built.

Lviv is a great ciltural centre of Ukraine. Besides its 16 museums, a philharmonic society and circus several theatres perform in Lviv.

Chernihiv

Chernihiv is the second oldest city in Ukraine after Kyiv. Historical science testifies to the fact that people settled in the area one hundred thousand years ago. The history of Chernihiv is the history of the struggle of its inhabitants for freedom and social justice. The Chernihiv Cossacs proved to be brave warriors and didtinguished themselves in so many military battles.

There are a lot of historical and cultural monuments in Chernihiv. Among them are: Museum of M.Kotsyubynsky (a prominent Ukrainian writer), Antoniyev's Caves, Spasky and Troyitsky Cathedrals and many others.

Chernihiv stands on the banks of the Desna River.

Pereyaslav-Khmelnitsky

Pereyaslav-Khmelnitsky is a real wonder. The town is situated not far from Kyiv, and happens to be the third oldest town in Ukraine after Kyiv and Chernigiv. Here the mighty prince Volodymyr Monomakh wrote his remarkable Exhortation and his letter to Prince Oleh Svyatoslavovych. Here the biographies of the first Martyrs of the Land of Rus' Borys and Hlib were written. The town survived all the wars and invasions and nowadays it has no fewer than 22 museums.

Dnipropetrovsk

Dnipropetrovsk was founded in 1776. At first it was a small provincial town, named Katerynoslav. Today it is a large industrial center on banks of the Dnipro. The city is well-known for developed ferrous metallurgy, complex machine building, metalworking and chemical industries.

Dnipropetrovsk can boast of many historical and architectural monuments, among them the monument to General Yefym Pushkin, the Transfiguration Cathedral, and Shevchenko Park with its famous island and fresh-water aquarium.

Activity 11. Say if the sentences are true or false.

1. Kharkiv region is closely connected with Ukrainian Cossatstvo.
2. Kharkiv was the capital of Ukraine for more than 50 years.
3. Odesa is believed to be "Southern Window" to Europe.
4. Lviv is the ancient capital of Slobidska Ukraina.
5. Khortytsya is one of the oldest Ukrainian cities.
6. Pereyaslav-Khmelnitsky is one of the youngest cities of Ukraine.
7. Chernihiv stands on the Desna River.
8. Dnipropetrovsk has changed its name several times.

UNIT 3
THE UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

Who Are the British?

Great Britain is an island with three different nations: England, Scotland and Wales. Many learners of English say *England* or *English* when they mean *Britain* or *British*. This is a mistake! The United Kingdom (UK) is a political name for England, Scotland, Wales and Northern Ireland together. When people say *Britain* or *British,* they are talking about the UK too.

Activity 1. Read the article quickly and decide what the main idea of the article is. Try to guess the meaning of the underlined words from the context.

1 Languages in Britain
2 Multicultural Britain
3 Britain's crisis

Do the British Know who they are?

A To the rest of the world, people from the UK are British. But it's surprising to learn that only 31 percent of people in the UK say they are just British. In fact, nearly half the population says their nationality is something else – English, Scottish, Welsh, Irish or perhaps Vietnamese, Indian or Somali. Some people, about 16 percent, even say that they have two nationalities: they are British, but also Scottish or Chinese. There are hundreds of possibilities! Are they confused? Is it a problem?

B No, it doesn't seem to be. Britain is changing all the time and the British are not just tolerant of differences – they are proud of them. They enjoy the diversity that multiculturalism gives them. The ethnic groups that exist in the UK bring with them at least six major religions, including Christianity, Islam, Hinduism, Buddhism, Sikhism and Judaism. Each community contributes its own culture and language. Britain still has two official languages; English and Welsh, but they speak many more – approximately 150 in fact – from Mandarin Chinese to Urdu. Many of them are even bilingual.

C And then there is the fun stuff that cultural diversity brings, in music, food and the arts. The days of fish and chips are behind the British, as a walk around capital shows. Almost every district has Lebanese, Chinese, Thai and Vietnamese

restaurants. Thousands of Londoners visit the Notting Hill Carnival every year to dance to steel bands, reggae, soca, calypso and jazz. Their cinemas show films from India and South America and thousands of people fill British pubs and clubs to listen to everything from Irish dance bands to African hip-hop. Welcome to New Britain: a confident, tolerant country which is proud of its many cultures.

Activity 2. Read the article again. Circle the words in each paragraph that show the main ideas.

Activity 3. Use your circled words to help you match the headings with the paragraphs. There are two headings you don't need.

1. Religion and language
2. Different generations
3. Statistics
4. Geography and population
5. Entertainment and food

Activity 4. Decide which sentence is the best summary of the article.

1. A typical British person doesn't know what his/her nationality is.
2. Many people don't want to call themselves British.
3. Britain's identity is changing and this makes life in Britain more exciting.

Activity 5. Look at the underlined words in the text and match them with the definitions.

1. a belief in a god or gods _____
2. to be able to speak two languages _____
3. people who live in the same area or town _____
4. the number of people living in a country _____
5. having many types of people or things at the same time _____
6. having people from many different cultures _____

Activity 6. Read the text about London. Complete the table below using information from the text.

London is the capital city of England and the United Kingdom, the largest metropolitan area in the United Kingdom and the largest urban zone in the European

Union by most measures. London has been a major settlement for two millennia, its history going back to its founding by the Romans in 43 AD, who called it Londinium. London's ancient core, the City of London, largely retains its square-mile medieval boundaries.

London became capital in the ninth century. Since at least the 17th century, the name London has also referred to the metropolis developed around this core. The bulk of this conurbation forms the London region and the Greater London administrative area, governed by the elected Mayor of London and the London Assembly.

London is a leading global city, with strengths in the arts, commerce, education, entertainment, fashion, finance, healthcare, media, professional services, research and development, tourism and transport all contributing to its prominence. It is the world's largest financial centre alongside New York, has the largest city GDP in Europe and is home to the headquarters of more than 100 of Europe's 500 largest companies. It has the most international visitors of any city in the world. London Heathrow is the world's busiest airport by number of international passengers. London's 43 universities form the largest concentration of higher education institutions in Europe. In 2012 London will become the first city to host the Summer Olympic Games three times.

London has a diverse range of peoples, cultures and religions, and more than 300 languages are spoken within its boundaries. In July 2007 it had an official population of 7,556,900 within the boundaries of Greater London, making it the most populous municipality in the European Union. The Greater London Urban Area is the second largest in the EU with a population of 8,278,251, while London's metropolitan area is the largest in the EU with an estimated total population of between 12 million and 14 million.

London contains four World Heritage Sites: the Tower of London; Kew Gardens; the site comprising the Palace of Westminster, Westminster Abbey and St Margaret's Church; and the historic settlement of Greenwich (in which the Royal Observatory marks the Prime Meridian (0° longitude) and GMT). Other famous landmarks include Buckingham Palace, the London Eye, Piccadilly Circus, 30 St Mary Axe (''The Gherkin''), St Paul's Cathedral, Tower Bridge and Trafalgar Square. London is home to numerous museums, galleries, libraries, sporting events and other cultural institutions including the British Museum, National Gallery, British Library, Wimbledon and 40 theatres.

London's Chinatown is the largest in Europe.

The London Underground network is the oldest underground railway network in the world and the most extensive after the Shanghai Metro.

First name	
Became capital	
Area	
Population	
Date of foundation	
Founders	
Location	
The oldest part	
Most popular tourist destinations	
Most famous art galleries and museums	
World Heritage Sites	
The biggest airport	
Basic means of transport	

Which piece of information is not in the text? Can you provide it?

Activity 7. Find the following numbers in the text. What do they refer to?

40 43
17 2000
2012 9 12 million

Activity 8. Quickly read the guidebook extract about the London Eye and answer the questions.

1. How high is the London Eye?
2. How far can you see on a clear day?
3. How many capsules are there?
4. How many passengers are there in each capsule?
5. How long is the trip?
6. How fast does it move?
7. What time does it open / close? In the summer
   In the winter
8. Can you get tickets on the day you want to go?
9. Where is the ticket office?
10. Which underground station is near the London Eye?

The London Eye

The London Eye was opened on New Year's Eve 1999 to celebrate the Millennium. It is 135 meters high, and from the top you can see all of London. On a clear day you can even see Windsor Castle, which is 40 kilometers away. The London Eye has 32 capsules, each with **room** for 25 people. Each "trip" lasts 30 minutes. It moves quite slowly, at a speed of about 15 meters a minute, but it never stops. **Passengers** have to get on when it's moving.

Opening times Daily from 9 a.m. to 10 p.m. in the summer and from 10 a.m. to 6 p.m. in the winter.

Tickets In advance online or by phone. A limited number of tickets **are available** on the day from the Ticket Office in Country Hall (the building next to the Eye), but go early because you often have **to queue**.

How to get there 5 minutes' walk from Waterloo underground station

Activity 9. Match the highlighted words and expressions with their meanings.

1 _____ before you go
2 _____ you can buy them
3 _____ every day
4 _____ to wait in a line
5 _____ space (for people or things)
6 _____ people who are travelling

UNIT 4

EDUCATION

Activity 1. Read the text. Complete the table below using information from the text.

The History of Education

As long as we continue to live we continue to learn, and the education we receive when we are young helps us to continue learning. We are taught to read and to write, and are taught many essential facts about the world and shown how to sort them out, so we shall be able to find out things ourselves and not to ask other people.

The first teachers were fathers and mothers, but very early in the history of man children began to be taught by people other than their fathers and mothers. Schools first started in Egypt 6 thousand years ago, so that it was invention of

writing which made them necessary. Reading and writing were quite different from the skills used in everyday life, and writing made it possible to store up knowledge which grew with each generation.

Only the sons of nobles attended the first Egyptian schools, which taught reading, physical education and good behavior. In ancient India the priestly caste decided what should be taught to each of four castes into which the people were divided.

In China, until 19th century, education was organized according to social classes, and consisted by learning the scriptures by heart.

The Spartans, strong and warlike people, gave a purely military education to their children. At the age of seven all the boys of noble families were taken from their homes and sent to live in schools. They were kept under a very strict discipline and were taught hunting, military scouting, swimming and the use of weapons. The Spartans despised literature and some people think they could not read.

The Athens built a liberal education – one that helps a man to develop all sides of his nature, helps him to make beautiful things and to find the best way of his life. They thought it important to educate the body as well as the mind, and had a program of physical training which consisted of running, jumping, wrestling and throwing disks. Only the children of nobles were taught, common people were not educated. They were trained in craftsmanship, workmanship and trades.

The Romans were very good at organizing; they were the first people to have schools run by the government free of charge. Throughout their great empire there was a network of such schools which provided for three stages of education.
At six or seven the children went to the primary school, where they learnt reading, writing and arithmetic. At the age of 12 boys from the rich families went to "grammar" school to study Greek and Latin. At the age of 16, young people who wanted to enter politics went to the schools of rhetoric.

In Great Britain the first teachers were craftsmen. They taught children to read, write and count, to cook and mend their own shoes. In the early 19th century the main system of teaching was the "Monitor" system. The teacher could manage a class of 100 or more by using older pupils or "monitors" to help him.

The name of the country	**Who was taught**	**What was taught**
Egypt		
Ancient India		
China		
Sparta		
Athens		
Roman Empire		
Great Britain		

Activity 2. Decide if the following statements are true or false.

1. In China until 19th century, education was organized according to social classes, and consisted of writing and reading scriptures.
2. Schools first started in Egypt 10 thousand years ago.
3. Only the sons of nobles could be educated at schools in Egypt.
4. The Spartans gave a liberal education to their children.
5. The Spartans taught their children to read from an early age.
6. The Athens thought it important to educate the body as well as the mind.
7. The Athens created a liberal education that could help a man to develop all sides of his nature.
8. Reading and writing in Egypt were the same as the skills used in everyday life.
9. The Romans were the first who had schools run by the government.
10. In Great Britain the first teachers were parents.

Activity 3. Read the text. Consult your dictionary.

Higher Education in Ukraine

Ukraine is a member of the UNO, Council of Europe, UNESCO and nearly 40 other influential international organizations, such as The International Monetary Fund, International Labour Organization, etc.

Higher education in Ukraine has always been and still preserves high quality of education. Over 20 years of independence the country has built a well-developed, competitive and ramified system of national education in the European educational area.

At the moment Ukraine runs over 800 higher educational institutions of all accreditation levels and forms of ownership: universities, academies, institutes, conservatories, colleges, technical and specialized schools. Our graduates, especially those who have diplomas in mathematics, physics, medicine, aviation and naval professions, engineering and chemical technologies are in demand all over the world which is evidenced by the fact that Ukraine has signed the Lisbon Convention on Mutual recognition of qualifications of higher education in European region.

The academic year in higher educational establishments in Ukraine starts on the 1st of September. It is divided into two terms, the first term is from September to the end of January and the second begins in February and ends in June. Each term lasts 17 - 18 weeks, followed by a 3 week examination period.

Foreign citizens who would like to enter the higher educational establishments in Ukraine get visas at the Embassy or diplomatic representative offices of Ukraine in their countries and on the grounds of invitation from Ukrainian State Center of

International Education of the Ministry of Education and Science of Ukraine or a higher educational institution.

All leisure and sports facilities are available both for foreigner and Ukrainian students. Tuition, accommodation and other facilities fees are fixed in the corresponding agreements. In comparison with the western countries education and accommodation fees are quite reasonable in Ukraine for all strata of population. Almost all institutions offer accommodation at a moderate price. You can also rent an apartment.

Ukrainian higher educational establishments welcome everybody giving them an opportunity to obtain education of the international level.

Activity 4. Answer the following questions:

1. Are Ukrainian diplomas recognized abroad?
2. What is the Lisbon Convention?
3. What facilities are available for both foreigners and Ukrainian students?
4. How can foreign students enter the higher educational establishments in Ukraine?
5. Is it expensive to get the higher education in Ukraine?

Activity 5. Look at the table and answer the questions.

Education in England

The School System

Typical Age	**Type of Education**	**Type of School**	**School Years and Exams**
3 - 4	**Pre-School Education** This is not compulsory, but 47 percent of children attend	**Nursery school/ Playgroup**	
4/5 - 10	**Primary Education**	**Primary School**	**Year 1 – Year 6**

11 - 18	**Secondary Education** Students can leave school after Year II (16 years old) but more than 50 percent continue education for another two years (Years 12 and 13).	**Secondary School** (usually comprehensive schools, which are for students of all abilities.) Some students choose to study for their A-levels at a College of Further Education	**Year 7 – Year 11 GCSEs** **Year 12 – Year 13** **A - Levels**
19 - 22	**Higher Education** About 40 percent of 19-year-olds enter higher education	**University** (three or four years which finish with a Bachelor's degree – many students take a break (a gap year) before they start university.	

Exams

GCSEs = General Certificate of Secondary Education – students usually take GCSEs in five to ten subjects at the age of 16.

A-levels = Advanced Level – students usually take two or three subjects at the age of 18. You usually need A-levels to go to university.

1. How old are children in Britain when they start their education?
2. At what age can they legally finish their education?
3. How many years of compulsory education do students have before they take their school-leaving exams (A-levels)?
4. How old are most students when they finish university?

Activity 6. Read the text. Consult your dictionary.

Higher Education in the UK

There are more than 60 universities in the UK. The leading universities are Cambridge, Oxford and London. English universities differ from each other in traditions, general organization, internal government, etc. British universities are comparatively small, the approximate number is about 7-8 thousand students. Most universities have fewer than 3000 students, some even less than 1500 ones.

London and Oxford universities are international, because people from many parts of the world come to study at one of their colleges. A number of well-known scientists and writers, among them Newton, Darwin, Byron were educated in Cambridge. A university consists of a number of departments: Art, Law, Music, Economy, Education, Medicine, Engineering, etc. After three years of study a student may proceed to a Bachelor's degree, and later to the degrees of Master and Doctor.

Besides universities there are 300 technical colleges at present in Britain, providing part-time and full-time education. The organization system of Oxford and Cambridge differs from that of all other universities and colleges. The teachers are usually called Dons. Part of the teaching is by means of lectures organized by the university. Teaching is also carried out by tutorial system. This is the system of individual tuition organized by the colleges. Each student goes to his tutor's room once a week to read and discuss an essay which the student has prepared. Some students get scholarship but the number of these students is comparatively small.

There are many societies and clubs at Cambridge and Oxford. One of the most famous is Debating Society at which students discuss political and other questions with prominent politicians and writers. Sporting activities are also numerous. The work and games, the traditions and customs, the jokes and debates – all are parts of students' life there.

It should be mentioned that not many children from the working-class families are able to receive higher education as the fees are very high. Besides that special fees are taken for books, for laboratory works, exams and so on.

Activity 7. Answer the following questions:

1. In what way are English universities different from each other?
2. What famous people were educated in Cambridge?
3. Who are Dons?
4. What is Debating Society?
5. Why is it a problem for children from the working-class families to get higher education in Oxford and Cambridge?

Activity 8. Read the text. Consult your dictionary.

Universities in Great Britain

There is now a **gradual** progress away from exclusiveness in British education.

Nowhere is this progress more **evident** than in the universities. Formerly they were **restricted** to the rich. Now thanks to the many **scholarships** awarded both by the state and by local authorities, they are open to all intelligent pupils both male and

female: and the proportion of ex-State school students to ex-public school students continues to **increase**. This is not because fewer (редкие) public schoolboys are going on to universities indeed they still tend to **predominate** in Oxford and Cambridge, but because the total number of students of all kinds especially those studying science and technology is increasing to meet the needs of modern **civilization**.

There are well over forty universities in Britain as follows:

a) Oxford containing about thirty separate colleges, dating from the twelfth century.

b) Cambridge with about twenty separate colleges dating from the thirteenth century.

c) Four Scottish universities, dating from the fifteenth and sixteenth centuries: St. Andrews, Glasgow, Aberdeen, Edinburgh.

d) Three other universities containing several colleges dating from the nineteenth century: Durham; London, with many different colleges and schools and far more students than any other British university; Wales, with colleges at Aberystwyth, Cardiff, Bangor and Swansea.

e) A large group of nineteenth – and twentieth – century universities which all started as university colleges preparing students for London **degrees**, but which now **award** degrees of their own: Manchester, Leeds, Liverpool, Bristol, Sheffield, Birmingham, Nottingham, Reading, Exeter, Southampton, Leicester, Hull.

f) A group of post-war universities, or university colleges many of which are trying to break away from the traditional specialist courses and to teach a more balanced mixture of subjects: Keel, East Anglia, Essex, Kent, Lancaster, Sussex, Warwick, York, Newcastle, Dundee.

g) A dozen universities of technology, promoted during the 1960s from older colleges.

The universities in group (e) and (f) are those usually referred to by the term ‘red-brick’. This describes their construction which is contrasted with the more dignified and solid-looking ancient stone architecture of Oxford and Cambridge (Oxbridge).

Two features of Oxford and Cambridge are widely admired and are being gradually extended to other universities. One is the college system whereby all students live in college during at least part of their course. The value of this lies in fostering a community **spirit** in which a useful mingling of intelligence can take place. In Oxford and Cambridge these colleges include **tutors** as well as students and largely self-governing.

The other feature is the tutorial system whereby each student gets personal tuition once a week in his tutor’s own room.

Recently, recognizing that everyone has the right to higher education but that for economic or social reasons many people may not get the opportunity the government decided to set up an Open University. As its name suggests this is open to everybody and does not demand the same formal **qualifications** as the other universities. It is non-residential and the courses are followed in the students' spare time while they carry on some other full-time **occupation**. Lectures are **broadcast** on television and radio and students correspond with their tutors by post. There are also some classes in the evenings and residential courses for two or three weeks in the summer. At the end of the course successful students are awarded a university degree.

Activity 9. Find the words in bold type in the text that mean:

1. to officially give someone something such as a prize or money to reward them for something they have done _____
2. an amount of money that is given to someone by an educational organization to help pay for their education _____
3. limited or controlled _____
4. a job or profession _____
5. a course of study at a university or college, or the qualification that is given to you when you have successfully completed the course _____
6. the attitude that you have towards something or while you are doing something _____
7. to have the most importance or influence, or to be most easily noticed _____
8. to send out radio or television programmes _____
9. happening slowly over a long period of time _____
10. a teacher in a British university or college_____
11. a skill, personal quality, or type of experience that makes you suitable for a particular job or position_____
12. easy to see, notice, or understand _____
13. a society that is well organized and developed,_____
14. to become bigger in amount, number, or degree _____

Activity 10. Read the text. Consult your dictionary.

Cambridge

Cambridge must be one of the best-known towns in the world, and can be found on most tourists' lists of places to visit. The principal reason for its fame is its University, which started during the 13th century and grew steadily, until today there are more than twenty colleges.

Most of them allow visitors to enter the grounds and courtyards. The most popular place from which to view them is from the Backs, where the college grounds go down to the River Cam.

The oldest college is Petershouse, which was founded in 1284, and the most recent is Robinson College, which was opened in 1977. The most famous is probably King's, because of its magnificent chapel. Its choir of boys and undergraduates is also very well known.

The University was exclusively for men until 1871 when the first women's college was opened. Another was opened two years later and a third in 1954. In the 1970s, most colleges opened their doors to both men and women. Almost all the colleges are now mixed, but it will be many years before there are equal numbers of both sexes.

To the North of this ancient city is the modern face of the University – the Cambridge Science Park, which has developed in response to the need for universities to increase their contact with high technology industry. It was established in 1970 by Trinity College, which has a long scientific tradition going back to Sir Isaac Newton. It is now home to more than sixty companies and research institutes.

The ideas of "science" and "parks" may not seem to go together naturally, but the whole area is in fact very attractively designed, with a lot of space between each building. The planners thought that it was important for people to have a pleasant, park-like environment in which to work.

Activity 11. Answer the following questions.

1. How old is Cambridge?
2. When did women get their right to study at Cambridge?
3. What is the purpose of a science park?
4. What are the advantages to the University and to industry?

Activity 12. Read the text. Consult your dictionary.

Education in the USA

Americans have always shown a great concern for education. Here are some figures to support this statement. Today, there are 43 million pupils and students in public schools at the elementary and secondary levels, and another 6 million in private schools throughout the country. In other words, 88% of American children attend public schools (financed by the government) and 12% go to private schools. Every year about 12 million Americans become students in over 3,000 colleges and universities of every type: private, public, church-related, small and large, in cities, counties and states.

The United States does not have a national system of education. Education, Americans say, is “a national concern, a state responsibility and a local function”. It means that most educational matters are left to the separate states or the local community. In general, colleges, universities and schools, whether state or private, are quite free to determine their own individual standards and requirements.

The major result of this unusual situation is that there is a lot of variety in elementary, secondary and higher education throughout the nation. For example, although all states today require that children attend school until a certain age, it varies from 14 to 18 years. Or, as another example, in about 60% of the states, local schools are free to choose subjects and teaching materials or textbooks which they think are appropriate. In other states they only use the teaching materials approved by the state Board of Education. Some universities are free to residents of the state; others are expensive, especially for out-of-state students, with tuition fees of thousands of dollars each year. Some school systems are extremely conservative, some very progressive and liberal. These and other important differences must always be considered while describing American schools.

Because of the great variety of schools and colleges, and the many differences between them, we cannot speak about a typical American school or college. Yet, there are enough basic similarities in structure among the various schools and systems to give some general comments.

Most schools start at the kindergarten level at the age of 5. The elementary school (or grade school) goes from age 6 to 11 or 12 (grades 1 to 5 or 6). This is usually followed by a middle school (grades 6 - 8) or Junior High School (grades 7-9). High schools include 3 or 4 years, usually until the age of 18 (unless a student “drops out”) and doesn’t graduate, that is earn a high school diploma). There are almost always required subjects and sometimes students at more advanced levels can choose some subjects. Pupils who do not do well often have to repeat courses or attend summer support classes which are also called “make up” or remedial classes.

Like schools in Britain and other English-speaking countries, those in US have always stressed “character” or “social skills” through extra-curricular activities, including sports. Most schools publish their newspapers; have student orchestras and choirs, theatre and drama groups and clubs. Many sports are available to students at no cost, and many schools have swimming pools, tennis courts and stadiums.

But those who believe that American schools are more fun than work overlook an important fact: a high school diploma is not a ticket that allows someone to automatically enter a university. Standardized examinations play a decisive role in the admission to most colleges and universities. Students who wish to go to a good university have to work hard. During studies any student can be asked to leave because of poor grades. As tuition fees are rather high at most colleges and universities, students who must work at outside jobs as well as study are the rule rather than the exception.

The following diagram gives a rough idea of the United States Educational structure.

Type of education (institution)	**Grade**	**Age**
Nursery school/pre-school		3 – 4
Kindergarten		3 – 5
Primary school	1st – 3d	6 – 8
Elementary or primary school	1st – 4th	6 – 9 (10)
Middle school or Junior High School	5 – 8th (7 – 9th)	10 – 14 (12 – 14)
Combined Junior – Senior High School	7 – 12th	12 – 18
4-year High School	9 – 12th	14 – 18
Senior High School (usually 4, sometimes 3 years)	9 – 12th	14 (15) – 18
Junior or Community College (2 years after High School)		
College or University (4 years to BA degree)		
College or University graduate school to MA/Ms or PhD		

Activity 13. Decide whether the following statements about the USA education are true or false.

1. The USA like many other countries has a national system of education.
2. More American children study in private schools than in public schools.
3. American children must attend school until a certain age.
4. It would be difficult to describe a “typical” American school because there are many differences from place to place.

5. All US schools teach the same subjects and use only the materials approved by the state board of education.
6. All American universities are very expensive.
7. Students in Junior and Senior classes can study some subjects of their choice.
8. College students with poor grades have to repeat the course.
9. Sports and extra-curricular activities are important school subjects as they develop “social skills”.
10. Many US students enjoy sports activities free of charge.

Activity 14. Read the text. Consult your dictionary.

Harvard

Harvard University is a private Ivy League university located in Cambridge, Massachusetts, United States, established in 1636 by the Massachusetts legislature. Harvard is the oldest institution of higher learning in the United States and the first corporation (officially The President and Fellows of Harvard College) chartered in the country. Harvard's history, influence, and wealth have made it one of the most prestigious universities in the world.

Harvard was named after its first benefactor, John Harvard. Although it was never formally affiliated with a church, the college primarily trained Congregationalist and Unitarian clergy. Harvard's curriculum and students became increasingly secular throughout the 18th century and by the 19th century had emerged as the central cultural establishment among Boston elites. Following the American Civil War, President Charles W. Eliot's forty year tenure (1869–1909) transformed the college and affiliated professional schools into a centralized research university, and Harvard became a founding member of the Association of American Universities in 1900. James Bryant Conant led the university through the Great Depression and World War II and began to reform the curriculum and liberalize admissions after the war. The undergraduate college became coeducational after its 1977 merger with Radcliffe College. Drew Gilpin Faust was elected the 28th president in 2007 and is the first woman to lead the university. Harvard has the largest financial endowment of any academic institution in the world, standing at $27.4 billion as of September 2010.

The university comprises eleven separate academic units — ten faculties and the Radcliffe Institute for Advanced Study — with campuses throughout the Boston metropolitan area. Harvard's 210-acre (85 ha) main campus is centered on Harvard Yard in Cambridge, approximately 3.4 miles (5.5 km) northwest of downtown Boston. The business school and athletics facilities, including Harvard Stadium, are

located across the Charles River in Allston and the medical, dental, and public health schools are located in the Longwood Medical Area.

As of 2010, Harvard employs about 2,100 faculties to teach and advise approximately 6,700 undergraduates (Harvard College) and 14,500 graduate and professional students. Eight U.S. Presidents have graduated from Harvard and 75 Nobel Laureates have been affiliated with the university as students, faculty, or staff. Harvard is also the alma mater of sixty-two living billionaires, the most in the country. The Harvard University Library is the largest academic library in the United States, and the second largest library in the country.

The Harvard Crimson competes in 41 intercollegiate sports in the NCAA Division I Ivy League. Harvard has an intense athletic rivalry with Yale University traditionally culminating in The Game, although the Harvard–Yale Regatta predates the football game.

Activity 15. Answer the following questions:

1. Where is Harvard located?
2. Why is Harvard one of the most prestigious universities in the world?
3. Who was John Harvard?
4. What was Drew Gilpin Faust famous for?
5. What is the main rival to Harvard?

UNIT 5

SCIENCE AND TECHNOLOGY

Activity 1. Read the text. Consult your dictionary.

Science and Technology in Ukraine

For a long time science in Ukraine developed as a part of the scientific efforts of the former Soviet Union. However, it had its own Academy of Science, founded in 1918 by Hetman Skoropadsky. Since 1994 it has been called the National Academy of Sciences of Ukraine.

Ukraine has contributed many outstanding scientists to the world. In the 15-17th centuries they were the talented physician Yury of Drohobych and linguists L.Zyzaniy and P.Berynda. The beginning of the 17th century was also marked by the creative activity of the prominent linguist M.Smotritsky whose “Slavic Grammar” became the basis of grammars of many Slavic languages. In the 18th century the main scientific

centre of Ukraine was the Kyivo-Mohyla Academy whose most famous representatives of that time were N.Maksymovich and O.Shumlyansky. The 19th and 20th centuries produced such outstanding scientists as the mathematicians M.Ostrogradsky and A.Pohorelov, the linguists O.Bodynsky, A.Potebnya, the historians V.Antonovich, M.Hrushevsky and D.Bahaliy, the orientalists A.Krumsky, the geologist P.Tutkovsky, the physicians V.Obraztsov, V.Filatov, the lawyer M.Vasylenko and many others.

Ukrainians are also proud of the fact that only several months after the nucleus of the atom was split by the English physicist G.Cockroft and E.Walton in 1932, the same result was achieved in one of the laboratories of Kharkiv Institute of Physics and Technology headed by I.Kurchatov and A.Ioffe. It was the first split of an atom in the USSR and a great success of Soviet scientists. Nobel Prize laureate Academician Lev Landau worked in Kharkiv for many years, heading the Institute of Physics and Technology. Another Nobel Prize laureate Ilya Mechnikov was born in Kharkiv region studied in Kharkiv National University and worked there for a long time. The first electronic computing machine in Europe was designed by our countryman S.Lebedev in 1951. The famous astronomer Academician Mykola Barabashov worked in Kharkiv Observatory and made significant discoveries concerning Mars, Moon and Venice. Ukrainian scientists made their contribution into the development of space explorations. The Southern Machine Building plant and Kharkiv "Khartron" designed and launched hundreds of artificial Earth satellites including the Famous "Zenith".

The world famous Ukrainian scientists are Volodymir Vernadsky and Yevhen and Boris Patons.

Volodymir Vernadsky was the first President of the Ukrainian Academy of Sciences. He was a prominent naturalist, mineralogist, the founder of geochemistry and biochemistry, the creator of the biosphere theory. Together with Alexander Fersman he was the first to suggest the use of radioactivity in studying geological processes. He was also the first to estimate the age of the most ancient elements of the Earth surface being 4.5 billion years old.

Yevhen Paton was an outstanding Ukrainian constructor, famous for his contribution in bridge-building and welding. He studied Engineering in Dresden (Germany) and St.Petersburg, and in 1904 became a professor of Kyiv Polytechnic Institute where he headed the bridge-testing laboratory. Yevhen Paton designed over 35 bridges, including the famous bridge across the Dnipro River that was named after him. He is also considered to be the father of electronic welding. The Institute of Electronic Welding the director of which Yevhen Paton had been till his very death, developed his theory and mastered the highly productive hidden welding technique which is used world-wide. His son Boris succeeded him and became an outstanding scientist, too. For many years he headed the institute founded by his father and was the President of Ukrainian Academy of Sciences. The Ukrainian Institute of Electronic

Welding and the American aviation and space firm “Pratt and Wiltny” established a joint research centre and an enterprise to develop the technologies of new materials, using the technique of speed electronic beam evaporation and vacuum condensation. They also founded a joint venture “Paton-Weld” to develop the Ukrainian technologies of permanent metal, metal-non-metal, ceramic and other combinations, and to market them in the USA and other countries.

Activity 2. Complete the table with the names of famous Ukrainian scientists according to the areas of their activity.

Linguistics	
Medicine	
Welding	
Building	
Astronomy	
Law	
Mathematics	
Physics	
History	
Geology	
Geochemistry	
Biochemistry	

Activity 3. Read the text. Consult your dictionary.

Science and Technology in Great Britain

Britain has a long tradition of research and innovation in science, technology and engineering. Its record of achievements begins with the contribution of Isaac Newton to physics and astronomy in the 17th century (theory of gravitation and three laws of motion) and goes to Charles Darwin with his theory of evolution, and inventions of Michael Faraday in the 19th century (the first electric motor, generator and transformer).

This long record of achievement in science and technology has continued throughout the 20th century. Nobel prizes for science have been won by 70 British, more than for any country except the United States.

In the last three decades major contributions have been made by British scientists working in universities, research institutes and industry. These have included theories on black holes and the origins of the Universe (Stephen Hawking);

the discovery of genes linked to cystic fibrosis and other diseases; the development of monoclonal antibodies and scanning techniques for medical diagnosis (Godfrey Hounsfield); the invention of DNA profiling to identify an individual from blood and tissue specimens; the world's first combined heart, lungs and liver transplant; Brian Josephson's research in superconductivity; Martin Ryle and Anthony Hewish discoveries in radio-astrophysics and many others. Research is continuing in the fields of medicine and genetics.

The Government considers that public funding should support work in the basic sciences to advance knowledge and technological capacity and provide training for scientists. Industry is expected, however, to fund the commercial application of scientific advances. Many companies in major industries finance their own research and their own laboratories.

Britain is involved in extensive programmes run by the European Community to strengthen the technological basis of European industry and improve its competitiveness in EUREKA, and industry-led scheme to encourage the development of high technology products throughout Europe. Britain's National Space programme is concerned mainly with earth observation from satellites for commercial and environmental applications. British scientists have played a role in most European Space Agency missions, including the investigation of Halley's Comet in 1986 by the British Giotto Spacecraft.

Activity 4. Answer the following questions:

1. What famous British scientists are mentioned in the text?
2. What are the main areas of their scientific activity?
3. What does the Government do to support sciences?
4. What scientific programmes is Britain involved in?

Activity 5. Read the text about famous British scientist Stephen Hawking. Consult your dictionary.

There is a man driving around in a motorized wheelchair in Cambridge, England. He can only move his eyes and two fingers on his left hand. He communicates through a computer. He types words on the computer and the computer speaks for him. This man is Stephen Hawking. People know him for his courage and his sense of humor. He is also the greatest physicist since Albert Einstein.

Stephen Hawking was born in 1942 in Oxford, England. His father was a specialist in tropical diseases. Stephen wanted to be a scientist too. He went to the University of Oxford and received a degree in physics. He then went to the University

of Cambridge to study for a Ph.D. During this time doctors discovered that he had ALS (Амиотрофический боковой склероз), which is sometimes called Lou Gehrig's disease. This fatal disease weakens all of the body's muscles. Most people with ALS live for five years. The doctors thought Hawking would live for only two and a half more years. When Hawking heard this, he became very depressed.

At about this time he met Jane Wilde, a language student at Cambridge. They fell in love and got married in 1965. Hawking has often said that his wife gave him the courage to continue to study and work. Although Hawking had become more severely paralyzed, he became a professor at Cambridge. Lucidly, the work of a physicist only requires one thing: the mind. Hawking had a son and then a daughter. He had another son 12 years later when his disease had gotten much worse. His youngest son has never heard his father's real voice. He has only heard the voice from the computer.

Hawking does research about how the Universe began. He sees connections and works out explanations that other people cannot. His research has influenced many other scientists. Some of his ideas are so advanced that other scientist cannot prove them yet. His most famous ideas are about black holes. Black holes are not really holes. They are areas in space that are very dense. They are so dense that even light cannot pass through. That is why they are called black holes.

As his disease got even worse, money became a problem for Stephen Hawking. He had a lot of medical expenses. He needed special wheelchairs, nurses 24 hours a day, and machines to help him read and speak. To earn extra money, Hawking gave speeches and published articles. Then someone told him to write a book that explained the Universe to ordinary people. Hawking agreed and wrote "A Brief History of Time". The book sold over 8 million copies worldwide, and Hawking became a millionaire. Even though most people could not understand Hawking's ideas, he amazed them. Hawking became world famous. He met the Queen of England, he was on the covers of magazines, and he appeared on television shows.

In 1990, Hawking ended his 25 year marriage. This was shocking to many of his friends because his wife, Jane, was very devoted to him. She took care of all his needs. She fed him, dressed him, and raised their children by herself. Hawking left her for a younger woman – his nurse! They got married in 1995.

Hawking's strong personality and spirit have helped him to live with ALS for over 30 years. He has helped to make people aware of ALS and other disabilities. Hawking teaches us that even though a person is physically disabled, the mind has no limits.

Activity 6. Answer the following questions:

1. What are the only parts of Hawking's body that he can move?
2. How does Hawking speak to people?

3. How many children does Hawking have?
4. What is Hawking's job at the University of Cambridge?
5. Where did Hawking study for his degree in physics?
6. What famous book did Hawking write?
7. How many copies of his book sold?

Activity 7. Decide if the following statements are true or false.

1. Stephen Hawking is an example of someone who cannot face his problems.
2. The doctors who told Hawking that he had ALS expected him to die.
3. Hawking's disability did not stop him from living a happy and successful life.
4. ALS causes problems only with the body, not the mind.
5. Hawking's book was only popular with scientists.
6. Hawking divorced his wife because she didn't help him.

Activity 8. All the paragraphs in this story about James Watt are jumbled up. Rearrange them into the correct order and read about this famous British scientist.

A. James Watt also made some other inventions. One of them is copying machine which was the predecessor of the typewriter. His other invention is a rotative engine that could run machines and became the basis of industry.
B. At eighteen James decided to become a professional instrument-maker and moved to his uncle's place in Glasgow. Then he continued his studies in London and returned to Glasgow as a skilled instrument-maker.
C. He liked mathematics and was fond of designing and making things. When he at last was able to attend school, he became one of the best pupils in mathematics and languages.
D. James Watt retired at the age of 64, but he never stopped working in his workshop inventing new things. When he died in 1819, a monument to his memory was erected in Westminster Abbey.
E. One day James Watt was asked to repair a small working model of an atmospheric-steam engine that was used for demonstration at the university lectures. He not only did that but also improved the model and made one of his greatest discoveries – a steam engine.
F. His passion for engineering was born when the boy read Isaac Newton's "Elements of Natural Philosophy". His first engineering creation was a small electric machine with which he gave his friends shocks that made them jump.

G. James Watt was born in 1736 in Scotland in the family of a shipbuilder. The boy was not strong and suffered from terrible headaches, so he couldn't go to school and his parents taught him at home. The boy had a very good memory and a natural love of work.

H. When Glasgow University needed a qualified specialist to install new instruments in a new observatory; James Watt was invited and did that job brilliantly.

Activity 9. Read the text. Consult your dictionary.

Science and Technology in the USA

From the first days as an independent nation in the 18th century, the United States has encouraged science and invention. It has done this by promoting a free flow of ideas, by encouraging the growth of useful knowledge, and by welcoming creative people from all over the world.

The USA constitution itself encourages scientific creativity. It gives Congress the power "to promote the progress of science and useful areas by securing for limited times to authors and inventors the exclusive rights to their writing and discoveries". This law formed the basis for the patent and copyright system which ensured that inventions and other creative works could not be copied or used without paying some kind of fee to the creator.

The most outstanding American scientist of the 19th century was Thomas Edison (1897-1931) who made more than a thousand original inventions the most famous of which was an electric bulb. The Wright brothers became world famous when they built and flew a flying machine in 1903. Early in the 20th century Henry Ford revolutionized transportation patterns with the development of an economical automobile.

The American invention that was hardly noticed in 1948 has created a computer age. And the progress of that age is changing the way millions of people work, study, conduct business deals and do research.

In terms of basic scientific achievements, nations are usually judged by the number of Nobel prizes won by their scientists in physics, chemistry and physiology or medicine. The first American scientist to win a Nobel Prize was Albert Michelson, who won the 1909 prize in physics for determining the speed of light. During the period from 1950 to the end of the 20th century, more American scientists have won Nobel prizes than the scientists of all other nations combined.

At present the United States leads in many areas of theoretical science. These include nuclear physics, genetics, space exploration and some others. One of the most exciting current scientific developments is an attempt to construct a genetic map of humans. Scientists are using knowledge about human genes to treat different

diseases. They hope that additional knowledge about human genes will lead to more effective treatment for many diseases.

Activity 10. Answer the following questions.

1. How has the United States encouraged development of science and technology?
2. What is the most important American invention in the history of sciences?
3. What is Albert Michelson famous for?
4. In what scientific areas does the USA lead?

Activity 11. Read about computer genius Bill Gates and his company Mcrosoft.

William Henry "Bill" Gates III (born October 28, 1955) is an American business magnate, philanthropist, author and chairman of a software company Microsoft. He is consistently ranked among the world's wealthiest people and was the wealthiest overall from 1995 to 2009, excluding 2008, when he was ranked third. During his career at Microsoft, Gates held the positions of CEO (Chief Executive Officer) and chief software architect, and remains the largest individual shareholder with more than 8 percent of the common stock. He has also authored or co-authored several books.

Today Microsoft employs more than 55,000 people in 85 countries and regions. In 2006, the company made profits of US $12.6 billion. But it wasn't always that way.

The seventies and eighties (1975 - 1989)

Microsoft was set up in Albuquerque (New Mexico, USA) in 1975 by Bill Gates and his friend Paul Allen. The two men were guided by a belief that every desk in every office, and every home, should have a computer, so they started to develop software for personal computers. At first, the company concentrated on selling to businesses. In the late 1970s, Microsoft moved to the Seattle area. It is still based there today, on its own "corporate campus" in Redmond. In the mid 1980s, Microsoft was growing rapidly and chose the Republic of Ireland as the location of its first production facility outside the USA. By the end of that decade, however, attitudes were changing in the USA, and the company was criticized for making its employees work too hard.

The nineties (1990 - 1999)

1994 Microsoft Encarta was launched – the first encyclopedia that was designed to run on a computer. The company slogan was also changed to: "Where do you want to go today?"

1995 Windows 95 was released, and more than a million copies were sold in the first four days. The company focus moved from business to the consumer. MSN, the Microsoft Network online service, was also launched, and quickly became one of the largest Internet service providers.

1996 Microsoft was named the company that Americans respected and admired the most.

1997 Microsoft opened its headquarters in India, now the second largest after its US headquarters.

1999 Gates's book "Business @ the Speed of Thought" was published. The book shows how computer technology can solve business problems in new ways. It is now published in 25 languages and is available in more than 60 countries.

The "noughties" (since 2000)

2001 Windows XP was released worldwide.

2004 Microsoft gave $3.5 million to relief and recovery efforts after the Asian tsunami. Bill Gates himself has given over $30 billion to support projects in global health and learning. In this year Microsoft faced legal action from the European Union for unfair competition.

2006 Plans were announced to develop the campus in Redmond.

2007 Microsoft Windows Vista was launched.

Activity 12. Which decade do the following statements go with?

1. People in the USA thought that Microsoft was the top company.
2. The company started making software abroad.
3. Sales of one particular product were very good.
4. Microsoft helped people after the terrible events in the Indian Ocean.
5. Gates and Allen started the company.
6. Microsoft became more interested in selling computers to people than to companies.
7. Microsoft had problems in Europe.

Activity 13. Find words in the text that mean:

1 an idea that you think is true
2 the programs that a computer uses to do different jobs
3 gave most of its time or attention to this
4 an area of land where company (or university) buildings are
5 a short, clever phrase that is used in advertising
6 made a new product available

UNIT 6

TRANSPORT ALL OVER THE WORLD

Activity 1. Read the ideas about transport in the future. Consult your dictionary.

1. Solar-powered bicycle

This has solar panels in the wheels, which collect sunlight and turn it into electricity and store in a battery. The battery then powers the front wheel. There is no need to use the pedals at all (unless you want to, of course).

Earlier such bikes had a motor for using when going uphill, but the motor wasn't as powerful as today's models and you had to connect the battery to an electricity supply very frequently. Modern technology means that, apart from using free energy from the sun, batteries and motors are lighter and deliver more power. There is also a battery charger (for cloudy days!). The bikes have a top speed of about 30 kilometres per hour.

1. Rocket belt

Some people still think that this is science fiction, but working models have existed since the 1950s and one appeared in the James Bond film "*Thunderball"* in 1965. You don't actually wear it like a belt, because it is so big and heavy (over 50 kg), so the name is a bit confusing. You put the rocket on your back like a normal rucksack, but you also have controls on front of you. The pilot has to wear a helmet and special protective clothing because the temperature from the jet engine can be over 700 C. At the moment, these can only fly for about 30 seconds but in the future the technology will improve and we will use them for everyday use around the city.

2. The Environmentally Friendly Car

The car is a fantastic invention but we need to make some changes. Oil is running out, and we use oil to make petrol, so we need to find a replacement fuel. Cars the use solar power are a perfect solution because they do not burn fuel, so they create no pollution. They take the energy from the sun and store electricity in batteries. Another feature of this car is that we can make them out of environmentally friendly materials, so when it eventually breaks down, you can recycle the parts.

Activity 2. Match the words to the definitions.

1. solar	a. stops working
2. pedals	b. something you burn to get energy
3. charger	c. an idea or a thing that is not real now

4. science	d. something you wear to protect your head
5. helmet	e. something which gives power to batteries
6. fuel	f. related to the sun
7. breaks down	g. use again
8. recycle	h. what you push to ride a bike

Activity 3. Answer the following questions:

1. Why does the solar-powered bicycle have a battery?
2. Name one problem that you can think of with solar-powered bicycles.
3. Are rocket belts just science fiction? Why / Why not?
4. Why does a rocket belt pilot have to wear protective clothing?
5. Why do we need to make changes to the cars we drive today?
6. What is the environmentally friendly car made of?

Activity 4. Read the text about City Transport. Translate it in writing.

Great cities need good transport systems. Which cities have the best systems?

Moscow needs a good transport system because it is the largest city in Europe. The metro is the busiest system in the world (3.2 billion passengers per year) and the stations are perhaps the most beautiful. Another Russian city, St. Petersburg, is called a "City of Trams" because it has the world's largest tram system – over 720 km long.

New York is a city that is famous for size – the population is larger, the buildings are taller and the sandwiches are bigger than in many other cities. It has the world's largest metro system (with 468 stations), the world's largest station (Grand Central) and the biggest bus system in the world (more than 4,300 buses).

London has perhaps the most famous buses in the world – the red double-deckers. It also has a good metro or underground system, and it is the oldest in the world. Unfortunately, it is also the most expensive in the world.

Many people think that public transport in Tokyo is the best in the world. It is certainly very busy and always crowded. In fact, the busiest train station is Shinjuku Station, Central Tokyo, with 3.2 million passengers a day.

Activity 5. What facts do these numbers refer to?

3.2 million 468 720 4,300 3.2 billion

Activity 6. Decide if the statements are true or false.

1. London is smaller than Moscow.
2. 2. New York's transport system is smaller than some others.
3. People do not know about the buses in London.
4. London's underground trains are cheap.
5. There are many passengers in Tokyo's metro stations.

Activity 7. Look at sentences 1-3 and match them with a-c below. Do we use superlative adjectives to compare one thing with another thing, or with several things in a group?

1. New York has the world's largest station.
2. London Underground is the oldest metro system in the world.
3. London Underground is the most expensive metro system in the world.

a) It's older than all the others.
b) It's more expensive than all the others.
c) It's larger than all the others.

Activity 8. Find more superlatives in the article and complete the table.

Adjective	Superlative
old	The _____
large	
big	
busy	
famous	
beautiful	
good	
bad	

Activity 9. Use the table to complete the sentences about three metro systems.

Metro system	New York	London	Tokyo
Length (km)	368	415	292
Ticket price ($)	1.50	2.50	1.35
Age (first trains)	1904	1863	1927

Length (long)

The metro system in New York is longer than the metro in Tokyo, but the London Underground is _____ system of the three.
The metro system in New York is _____ than the metro in London, but the Tokyo metro is _____ system of the three.

Activity 10. Write similar pairs of sentences for the other information in the table.

Price (expensive/cheap)
Age (old/modern)

Activity 11. Read the article about Green cars. Choose the correct verb 1-12 in the text.

Green driving

New technology and small, modern cars *helped/have helped* our roads and our environment but scientists say we *should/shouldn't* be even greener. So, what "green" cars *do people/are people going* to drive in the near future and the not-so-near future?

Half electric-half petrol

The electric-petrol car isn't actually new. It *was/has been* on the road for a few years. For long distances you drive on petrol, but for short trips around town you *should/are going to* use the electric battery. It's currently the most popular green choice.

100% Electric

At the moment you *had/have to* plug your electric car into the electricity every evening, but in the future you *won't/don't need* to do this. This is the cleanest way to drive but designers *have found/are going to find* one problem with electric cars – they're very quiet. These cars make no noise. Look out if you're walking!

Biofuel

Do you recycle your vegetable oil and animal products? You *should/have to* do this because one day these "biofuels" *are going to run/are running* our cars. Biofuel cars aren't on our roads now but many people believe they *should/will* be a better a better choice than electric cars in the future.

Activity 12. Are these statements true or false?

1. There are no green cars now but there will be in the future.
2. At the moment you can drive electric cars for days without stopping.
3. Green drivers like electric-petrol cars more than other types of green car.
4. Recycled vegetable oil and animal products are types of biofuels.

Activity 13. What do you think is the greenest type of transport? What type of transport will be the most popular in the future?

Activity 14. Complete the conversation with a-f.

a) Where did you
b) Do I have to
c) Have you ever
d) Should I take
e) What are you going to
f) Will it

A: I want to go to India in November. _____ been there?
B: Yes, I have. It's beautiful. _____ visit?
A: I'm not sure. _____ go?
B: I spent six months there. So O visited Delhi and Agra and then went north to Ladakh.
A: _____be cold in November?
B: Maybe in the north, but the south is very hot.
A: What about money? _____ cash or credit cards?
B: It depends. In the cities you can use credit cards. But cash is useful. Have you got your visa?
A: _____ get a visa?
B: Yes, you do! It takes a few weeks, so apply to the Embassy soon…

Activity 15. Complete the text about the London Underground by putting in the Present Perfect or Past Simple forms of the verbs in brackets.

London has had (have) an underground train system since the nineteenth century. The London Underground _____ (start) in 1863, when Victorian engineers and workers _____ (build) the Metropolitan railway. This railway line _____ (go) from Paddington Station to Farringdon Street Station, and steam engines _____ (pull) the coaches. Eleven more lines _____ (open) since then. The world's first underground electric railway _____ (open) in 1890. This line _____ (go) from the City of London to Stockwell in South London. The most modern line is the Jubilee line, which _____ (open) in 1979. Since the London Underground _____ (begin), many other cities, such as New York and Moscow, _____ (build) their own systems.

UNIT 7

COMPUTERS

Activity 1. Read and translate the text. Consult your dictionary.

Modern Means of Communication and Electronic Commerce

Connecting many computer networks and using common addressing system, the Internet has been growing rapidly since its creation in 1983, radio, telephone and cable television wires, and satellites being used to deliver Internet services. By the mid-1990s the Internet linked millions of computers throughout the world and it is sure to be most important commercial and popular means of communication nowadays. Having expanded considerably during the 1990s, the World Wide Web enables users easily to examine the internet sites and now it is likely to have become the leading informational service of the Internet.

Since the mid-1990s electronic commerce has become one of the most rapidly growing retail sectors involving the use of computer telecommunication networks for maintaining business relationships and selling information, services and commodities. Although e-commerce usually refers only to the trading of goods and services over the Internet, it actually includes broader economic activity such as business-to-consumer and business-to-business commerce as well as internal organizational transactions that support these activities.

A large part of e-commerce was transferred to the Internet after the first graphical "browser" software for the access to the World Wide Web had been introduced in 1993 and when the number of companies and individuals using "on-line" had greatly increased. In some fields new Internet retailers seem to have grown up overnight and begun successfully competing with traditional retailers. Most of recently established companies are known to include the electronic commerce in their business as well.

The further development of secure electronic transfer of sensitive information, such as credit card numbers and electronic funds transfer orders, is certainly to be essential to the continued growth of e-commerce. It is often necessary to ensure the encrypting of Web purchase forms, many individuals also usually encrypting their e-mail.

Among other innovations that have contributed to the growth of e-commerce are electronic directories and search systems for finding information on the Web; software agents that act autonomously to allocate goods and services; and special identifying services over the Internet. These intermediary services facilitate the sale of goods (actually delivering the goods in the case of information), the rendering of

services such as banking, ticket reservations, and stock market transactions, and even the delivery of remote education and entertainment. Specialists consider electronic auction sales and markets to be other rapidly developing parts of e-commerce. The former offer a large variety of goods from computers and electronics to books, recordings, automobiles and real estate, while the latter allow a buyer to choose offers from many sellers.

Businesses often develop private intranets for sharing information and collaborating within the company, these networks usually being isolated from the surrounding Internet by special computer-security systems. Businesses also often rely on extranets which are extensions of a company's intranet.

One should mention some more important benefits of e-commerce. Due to its development the role of geographic distance in forming business relationships is being reduced. Some traditional businesses are being replaced by their electronic equivalents or are being made entirely useless. Prices of commodity products are generally lower on the web and it results not only from lower costs of doing electronic business but also from the ease comparison shopping in cyberspace. A new form of collaboration known as a virtual company is flourishing now. This type of company is actually as a network of firms, each performing some of the processes needed to manufacture a product or deliver a service.

Activity 2. Answer the following questions:

1. What were the original uses of Internet?
2. Why has the Internet spread so widely all over the world?
3. How can individuals and businesses use the Internet?
4. What does the electronic commerce include?
5. When did e-commerce appear?
6. What promoted the development of e-commerce?
7. What are the benefits of e-commerce in comparison with the traditional retail system?

Activity 3. Translate the sentences from Ukrainian into English

1. Завдяки розвитку новітніх технологій для засобів зв'язку, послуги системи Інтернет можуть бути надані користувачам віддалених місць.
2. Завдяки всесвітній комп'ютерній мережі можливо отримати доступ до різноманітної інформації в системі Інтернет.
3. Комп'ютерна мережа, як відомо, використовується у різноманітних цілях, найважливішими з яких є електронна пошта і електронна торгівля.

4. Чим більше користувачів приєднуються до комп’ютерних мереж, тим швидше буде поширюватись електронна роздрібна торгівля.
5. Зв’язок за допомогою Інтернету має важливе значення як для індивідуальних користувачів, так і для організацій.
6. Усі типи комп’ютерних мереж повинні бути забезпечені системами безпеки для передачі секретної інформаії.

SUPPLEMENTARY READING

TEXT 1.

THE UNITED NATIONS (UN)

The United Nations (UN) is an international organization whose stated aims are facilitating cooperation in international law, international security, economic development, social progress, human rights, and achievement of world peace. The UN was founded in 1945 after World War II to replace the League of Nations, to stop wars between countries, and to provide a platform for dialogue. It contains multiple subsidiary organizations to carry out its missions.

There are currently 192 member states, including every internationally recognised sovereign state in the world but the Vatican City. From its offices around the world, the UN and its specialized agencies decide on substantive and administrative issues in regular meetings held throughout the year. The organization has six principal organs: the General Assembly (the main deliberative assembly); the Security Council (for deciding certain resolutions for peace and security); the Economic and Social Council (for assisting in promoting international economic and social cooperation and development); the Secretariat (for providing studies, information, and facilities needed by the UN); the International Court of Justice (the primary judicial organ); and the United Nations Trusteeship Council (which is currently inactive). Other prominent UN System agencies include the World Health Organization (WHO), the World Food Programme (WFP) and United Nations Children's Fund (UNICEF). The UN's most visible public figure is the Secretary-General, currently Ban Ki-moon of South Korea, who attained the post in 2007. The organization is financed from assessed and voluntary contributions from its member states, and has six official languages: Arabic, Chinese, English, French, Russian, and Spanish.

TEXT 2.

INFORMATION TECHNOLOGY (IT)

Information technology (IT) is the acquisition, processing, storage and dissemination of vocal, pictorial, textual and numerical information by a microelectronics-based combination of computing and telecommunications. The term in its modern sense first appeared in a 1958 article published in the Harvard Business Review, in which authors Leavitt and Whistler commented that "the new technology does not yet have a single established name. We shall call it information technology (IT).

IT is the area of managing technology and spans wide variety of areas that include but are not limited to things such as processes, computer software, information systems, computer hardware, programming languages, and data constructs. In short, anything that renders data, information or perceived knowledge in any visual format whatsoever, via any multimedia distribution mechanism, is considered part of the domain space known as Information Technology (IT). IT provides businesses with four sets of core services to help execute the business strategy. These four core services are broken into business process automation, providing information, connecting with customers, and productivity tools.

IT professionals perform a variety of functions (IT Disciplines/Competencies) that ranges from installing applications to designing complex computer networks and information databases. A few of the duties that IT professionals perform may include data management, networking, engineering computer hardware, database and software design, as well as management and administration of entire systems. Information technology is starting to spread further than the conventional personal computer and network technologies, and more into integrations of other technologies such as the use of cell phones, televisions, automobiles, and more, which is increasing the demand for such jobs.

In the recent past, the Accreditation Board for Engineering and Technology and the Association for Computing Machinery have collaborated to form accreditation and curriculum standards for degrees in Information Technology as a distinct field of study as compared to Computer Science and Information Systems today. SIGITE (Special Interest Group for IT Education) is the ACM working group for defining these standards. The Worldwide IT services revenue totaled $763 billion in 2009.

TEXT 3.

COMPUTERS

Today economy increasingly works with computers. Computers also facilitate our everyday work and study.

Modern companies analyze sales of products as well as potential sales of products; programme their whole production by electronic data processing equipment.

Banks also work with computers. In some cases they consult computer centres specializing in financial data concerning corporations, sales, cash flow, prices, etc.

Stock exchanges have installed electronic data systems that answer all the broker’s questions.

Computers are widely used in agriculture. Say, analyzing of essential animal characteristics with the help of a computer is important for cattle breeding.

In industry cars, devices, tools and instruments are of the designed by computers. The computers have entered education. In management young specialists are trained in special courses. All statistical information is put and kept in computer's memory.

In short, computers are everywhere in our modern life.

Computer hardware consists of a tower, a monitor, a keyboard, a printer and their connections.

Computer software has various programmes:

- word processing;
- database management;
- accounting;
- auditing;
- communications;
- process control, etc.

The advantages of computers are evident. They solve problems very rapidly. Now the computer is being more and more involved in making decisions at the senior management level.

TEXT 4.

SILICON VALLEY

Silicon Valley is in the southern part of the San Francisco Bay Area in Northern California in the United States. The region is home to many of the world's largest technology corporations. The term originally referred to the region's large number of silicon chip innovators and manufacturers, but eventually came to refer to all the high-tech businesses in the area; it is now generally used as a metonym for the American high-tech sector. Despite the development of other high-tech economic centers throughout the United States and the world, Silicon Valley continues to be the leading hub for high-tech innovation and development, accounting for 1/3 of all of the venture capital investment in the United States.

Geographically, the Silicon Valley encompasses all of the Santa Clara Valley including the city of San Jose (and adjacent communities), the southern Peninsula, and the southern East Bay.

Since the early twentieth century, Silicon Valley has been home to an electronics industry. The industry began through experimentation and innovation in the fields of radio, television, and military electronics. Stanford University, its affiliates, and graduates have played a major role in the development of this area.

A powerful sense of regional solidarity accompanied the rise of Silicon Valley. From the 1890s, Stanford University's leaders saw its mission as service to the West and shaped the school accordingly. At the same time, the perceived exploitation of the West at the hands of eastern interests fueled booster-like attempts to build self-sufficient indigenous local industry. Thus, regionalism helped align Stanford's interests with those of the area's high-tech firms for the first fifty years of Silicon Valley's development.

During the 1940s and 1950s, Frederick Terman, as Stanford's dean of engineering and provost, encouraged faculty and graduates to start their own companies. He is credited with nurturing Hewlett-Packard, Varian Associates, and other high-tech firms, until what would become Silicon Valley grew up around the Stanford campus. Terman is often called "the father of Silicon Valley."

During 1955-85, solid state technology research and development at Stanford University followed three waves of industrial innovation made possible by support from private corporations, mainly Bell Telephone Laboratories, Shockley Semiconductor, Fairchild Semiconductor, and Xerox PARC. In 1969 the Stanford Research Institute operated one of the four original nodes that comprised ARPANET, predecessor to the Internet.

REFERENCES

1. Ельбрехт О.М., Ельбрехт В.В. Focus on Ukraine. English student's book. – Харків: Ранок, 2001. – 72 с.
2. Stuart McKinlay, Bob Hastings. Success. – Pearson Education Limited, 2007 – 144 p.
3. Ian Lebeau, Gareth Rees. Language Leader. Elementary Course book. – Pearson Education Limited, 2008.
4. Ian Lebeau, Gareth Rees. Language Leader. Pre-Intermediate Course book. – Pearson Education Limited, 2008.
5. Rob Nicholas, Herbert Puchta, & Jeff Stranks. More! 4 Extra Practice Book. – Cambridge University Press, 2008.
6. Norman Coe, Mark Harrison, Ken Paterson. Pxford Practice Grammar. – Oxford University Press, 2006.
7. Cambridge international dictionary of English. – Cambridge University Press, 1773 p.
8. Longman dictionary of contemporary English. – New ed. 1949 p.
9. http//Wikipedia.com Encyclopedia Wikipedia on Line

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